



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

1-3

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,115	02/10/2004	Yoshinori Iwaizono	28569.7436	2114

20322 7590 06/26/2007
SNELL & WILMER L.L.P. (Main)
400 EAST VAN BUREN
ONE ARIZONA CENTER
PHOENIX, AZ 85004-2202

EXAMINER

BARAN, MARY C

ART UNIT	PAPER NUMBER
----------	--------------

2857

MAIL DATE	DELIVERY MODE
-----------	---------------

06/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Amendment

1. The action is responsive to the arguments filed on 11 April 2007. Claims 1-4 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "pattern" in claim 1 is used by the claim to mean "a pad, probe or terminal", while the accepted meaning is, "a pattern is a form, template, or model which can be used to make or to generate things or parts of a thing." The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Takano et al. (U.S. Patent No. 6,114,839) (hereinafter Takano).

Referring to claim 1, Takano teaches a secondary battery control circuit (see Takano, Abstract), comprising:

a liquid detection section for detecting infiltration or generation of a liquid inside a secondary battery or inside a battery pack in which the secondary battery is installed (see Takano, column 8 lines 1-10 and lines 38-45);

and a control section for interrupting charging/discharging of the secondary battery in a case where a liquid is detected by the liquid detection section (see Takano, column 8 lines 38-56),

wherein the liquid detection section controls the control section (see Takano, column 8 lines 38-56) based on impedance or resistance value detected between two electrically separated patterns (see Takano, column 7 line 66 – column 8 line 10 and Figure 1 “2b” and “2d”).

Referring to claim 2, Takano teaches a temperature detection section for detecting a temperature of the secondary battery (see Takano, column 8 lines 51-56), wherein the control section controls charging/discharging of the secondary battery based on the temperature detected by the temperature detection section (see Takano, column 8 lines 57-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al. (U.S. Patent No. 6,114,839) (hereinafter Takano) in view of Darmawaskita (U.S. Patent No. 6,184,659).

Takano teaches all the features of the claimed invention except that the secondary battery control circuit is formed on a single semiconductor chip.

Darmawaskita teaches that the secondary battery control circuit is formed on a single semiconductor chip (see Darmawaskita, column 4 lines 25-30).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Takano to include the teachings of Darmawaskita because forming the control circuit on a single chip would have allowed the skilled artisan to

easily implement a battery charger design and reduce the component count thereof (see Darmawaskita, column 4 lines 38-41).

Takano teaches all the features of the claimed invention except that the single semiconductor chip is enclosed in a sealing section of the secondary battery.

Darmawaskita teaches that the single semiconductor chip is enclosed in a sealing section of the secondary battery (see Darmawaskita, column 12 lines 38-56).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Takano to include the teachings of Darmawaskita because enclosing the semiconductor chip in a sealing section of the secondary battery would have allowed the skilled artisan to prevent leakage outside of the sealed section.

Response to Arguments

5. Applicant's arguments filed 5 June 2006 have been fully considered but they are not persuasive.

Applicant argues that Takano does not teach "controlling the control section based on impedance or resistance value detected between two electrically separated patterns." However, Applicant's arguments are not well taken.

Takano teaches two different methods of determining when to stop battery charging. In the first method, a temperature value is detected and used to determine leakage and interrupt charging. This temperature value is measured using a thermistor. Thermistors measure temperature changes and rely on the changes in its resistance

with changing temperatures. The temperature signal is therefore a resistance value used to stop battery charging when the battery is fully charged (see Takano, column 3 lines 12-21 and lines 46-58).

The second method implemented by Takano is electrolyte leakage detection. Electrolyte leakage is detected between terminal 2b and 2d (see Takano, Figure 1) by determining if the voltage between these two terminals is an open (i.e. zero volts) or a short (i.e. not zero volts). Inherently, an open circuit means infinite resistance and a short means no resistance. Therefore, leakage detection via a resistance value is necessarily present (see Takano, column 7 line 66 – column 8 line 10). Furthermore, because terminal 2b and 2d are separated by a battery (i.e. capacitors as shown in Figure 1 “2e”), they are electrically separated. Therefore, Takano teaches controlling the control section (see Takano, column 8 lines 38-56) based on impedance or resistance value detected between two electrically separated patterns (see Takano, column 7 line 66 – column 8 line 10).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C. Baran whose telephone number is (571) 272-2211. The examiner can normally be reached on Monday to Friday 9:00-5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone

Art Unit: 2857

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12 June 2007


CAROL S.W. TSAI
PRIMARY EXAMINER